

**REMARKS**

Claims 1-8 and 10-22 are pending in the application. Claims 1-8 and 10-22 stand rejected. All independent claims have been amended. Reconsideration and allowance of claims 1-8 and 10-22 is respectfully requested.

***Claim Rejections - 35 U.S.C. § 103***

Claims 1-8 and 10-22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,707,566 (Endoh), in view of U.S. Patent No. 6,552,813 (Yacoub).

The invention we are claiming is separate multicasting of print data. For example, multicasting an entire first print job to a first multicast group and multicasting an entire second print job to a second multicast group.

The advantage of the claimed invention is network bandwidth savings. By way of an example, consider a case where a host has a 100MB of print data and four printers available. Single multicasting involves the host multicasting the 100MB of print data once to a multicast address group. The single multicast transmission is then received by an intermediary that copies and distributes the 100MB transmission to each device that is part of the multicast address group. Therefore, between the intermediary and the four printers, approximately 400MB of bandwidth ( $4 \times 100\text{MB}$ ) is used.

In contrast, using separate multicasting, the 100MB of print data may be initially divided into a first batch of 50MB corresponding to the first two printers and a second batch of 50MB corresponding to the second two printers. The first batch is transmitted to an intermediary by way of addressing to a first multicast group for the first two printers. At the intermediary, the first batch is copied and one copy is delivered to each of the first two printers using approximately 100MB of bandwidth ( $2 \times 50\text{MB}$ ) between the intermediary and the printers. The second batch is also transmitted to an intermediary by way of addressing to a second multicast group for the second two printers using approximately 100MB of bandwidth ( $2 \times 50\text{MB}$ ) between the intermediary and the printers. Thus, a total bandwidth of only approximately 200MB is used between the intermediaries and the printers producing a bandwidth savings of approximately 200MB in this example.

Claim 1 has been amended. For example, claim 1 includes "dividing the number of copies into a first batch associated with a first multicast group of at least two corresponding, separate printers and a second batch associated with a second multicast group of at least two corresponding, separate printers." Support for the amendment may be found in the present

specification, page 4, lines 10-17. As described in the second sentence of that paragraph, each of the at least two batches are sent to separate printers. However, multicast transmissions are sent only once. See the present specification page 2, lines 14-15. Therefore, since each batch is sent to separate printers, at least two separate multicast transmissions each comprising separate batches of a same document may be used for a network bandwidth savings.

Endoh and Yacoub, alone or in combination, both fail to disclose the claimed invention. For example, in Endoh, only one multicast transmission is sent. See Col. 1, lines 53-56. Therefore, Endoh and Yacoub do fail to conserve network bandwidth between an intermediary and printers.

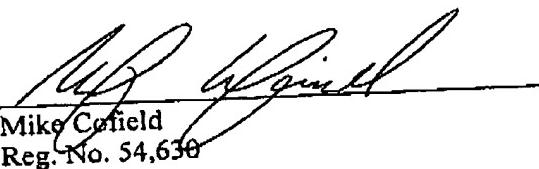
In contrast, claim 1 includes the element of separately multicasting the entire print jobs. Thus, claim 1 should be allowed. Claims 2-8 are dependant and should also be allowed. Claims 10, 16 and 20-22 have been amended and should be allowed for at least similar reasons as claim 1. Claims 11-15 and 17-19 are dependant and should also be allowed.

#### CONCLUSION

Allowance of claims 1-8 and 10-22 is requested. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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Respectfully submitted,  
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